

Application No. 10/766,939
Reply to Office Action dated June 25, 2007

Attorney Docket No. FS-F03228-01

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

1. (Currently amended): An image forming method comprising:

image-wise exposing to ~~a radiation source~~ a blue semiconductor laser which has a light emission peak intensity within a wavelength range of 350 to 450 nm a photothermographic material comprising, on a same surface of a support, a photosensitive silver halide having a silver iodide content of 40 to 100 mol%, a non-photosensitive organic silver salt of an aliphatic carboxylic acid including a silver behenate, a reducing agent, a binder, and an adsorbable redox compound represented by Formula (I), wherein, in Formula (I), A represents a group that can be adsorbed by silver halide; W represents a divalent connecting group; n represents 0 or 1; B represents a reducing group that is capable of reducing silver ions and is a residue derived from a compound represented by ~~any one of Formulas B₁ to B₅ and Formula B₁₃~~ ; and

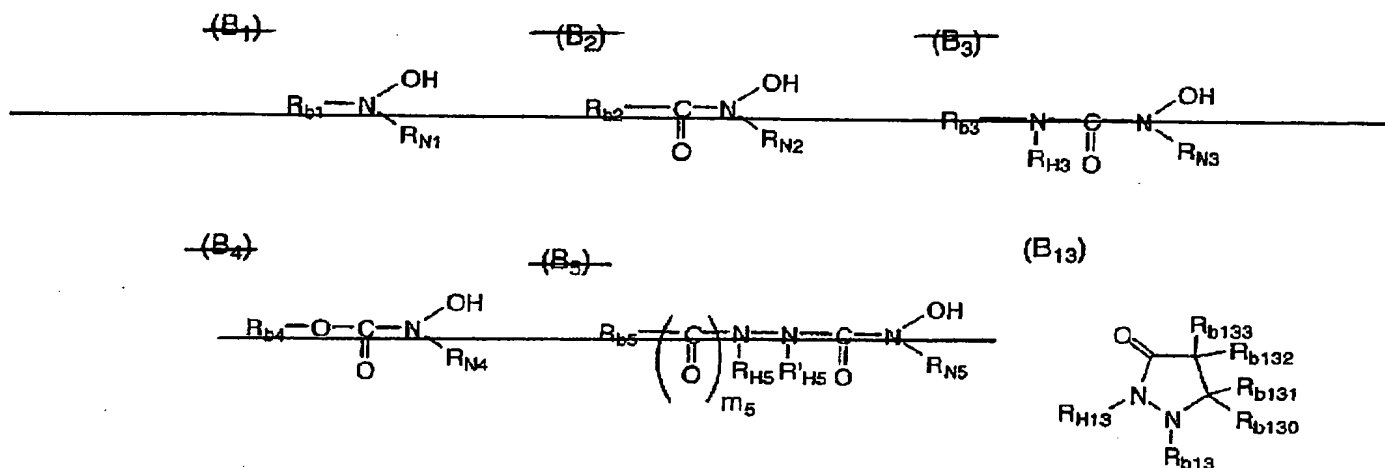
thermally developing the image-wise exposed photothermographic material with a developing time of 1 to 12 seconds and with a developing temperature of 110°C to 140 °C;

wherein ~~in Formulas B₁ to B₅ and in Formula B₁₃, R_{b1}, R_{b2}, R_{b3}, R_{b4}, R_{b5}, R_{b13}, R_{N1}, R_{N2}, R_{N3}, R_{N4} and R_{N5} each independently represents a hydrogen atom, an alkyl group, an aryl group or a heterocyclic group; R_{H3}, R_{H5}, R'_{H5}, and R_{H13} each independently represents a hydrogen atom, an alkyl group, an aryl group, an acyl group, an alkylsulfonyl group or an arylsulfonyl group, in which R_{H3} may alternatively represent a hydroxy group; R_{b130} to R_{b133} each independently represent a hydrogen atom or a substituent; and m₅ represents 0 or 1;~~

Formula (I) A-(W)_n-B

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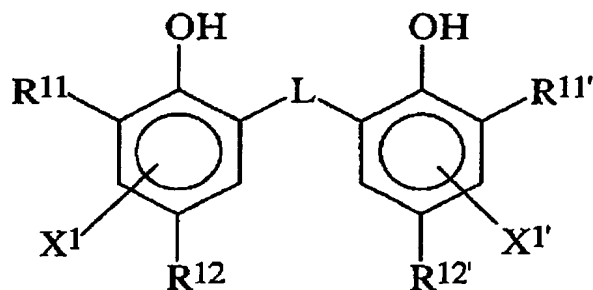
wherein the photothermographic material further includes a compound represented by the following formula (H):



wherein in formula (H), Q represents an alkyl group, an aryl group or a heterocyclic group; Y represents a divalent connecting group; n represents 0 or 1; Z₁ and Z₂ each independently represent a halogen atom; and X represents a hydrogen atom or an electron attracting group

and wherein the reducing agent is a compound represented by the following formula (R-1):

Formula (R-1)



wherein in formula (R-1), R¹¹ and R^{11'} each independently represent an alkyl group having 1 to 20 carbon atoms; R¹² and R^{12'} each independently represent an alkyl group having 2 to 20 carbon atoms; L represents a -S- group or a -CHR¹³- group; R¹³ represents a hydrogen atom or an alkyl group having 1 to 20 carbon atoms; X¹ and X^{1'}

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each independently represent a hydrogen atom or a group that can substitute a benzene ring.

2. (Original): The image forming method according to claim 1, wherein the developing time is 2 to 10 seconds.

3. (Currently amended): The image forming method according to claim 1, wherein the thermal development is conducted at a temperature of ~~80~~ 110 °C to ~~250~~ 130 °C.

4. (Cancelled.)

5. (Original): The image forming method according to claim 1, wherein the photothermographic material further includes an antifogging agent.

6. (Original): The image forming method according to claim 1, wherein the photosensitive silver halide has an average grain size of 5 to 50 nm.

7. (Original): The image forming method according to claim 1, wherein the photothermographic material further includes a development accelerator.

8. (Cancelled)

9. (Original): The image forming method according to claim 1, wherein the photothermographic material further includes a toning agent.

10. (Original): The image forming method according to claim 1, wherein the photothermographic material further includes an ultra-high contrast agent.

11. (Original): The image forming method according to claim 1, wherein the photothermographic material further includes a matting agent.

Claims 12-20 (Cancelled)

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21. (Previously presented): The method of claim 1 wherein the silver halide has a silver iodide content of 80 to 100 mol%.

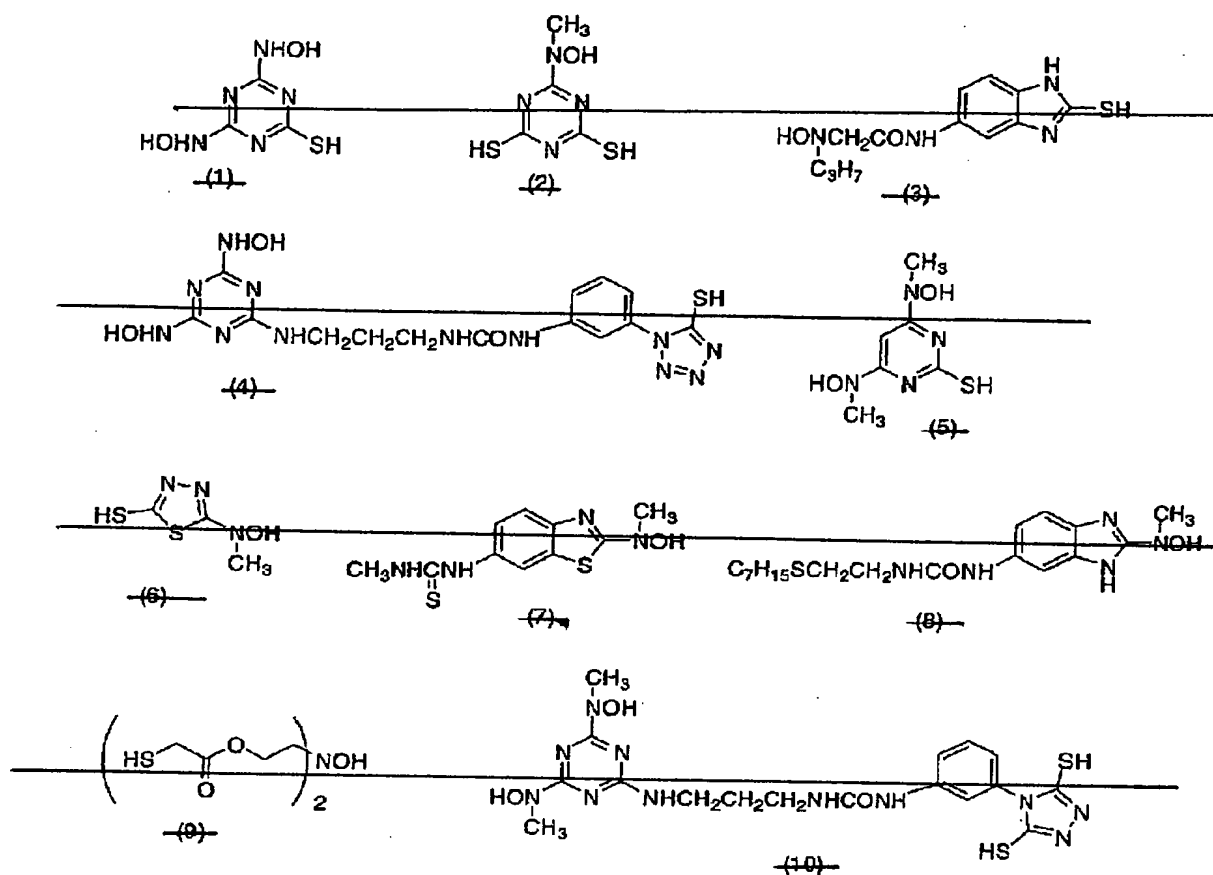
22. (Previously presented): The method of claim 1 wherein the silver halide has a silver iodide content of 90 to 100 mol%.

23. (Previously presented): The method of claim 1, wherein an adsorbable group represented by A is a mercapto group, a salt thereof, a thion group ($-C(=S)-$), a heterocyclic group containing at least an atom selected from a nitrogen atom, a sulfur atom, a selenium atom and a tellurium atom, a sulfide group, a disulfide group, a cationic group, or an ethynyl group.

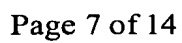
24. (Currently amended): The method of claim 1, wherein the adsorbable redox compound is represented by any of the following formulas ~~(1) to (38)~~ and (71) to ~~(81)~~ (79):

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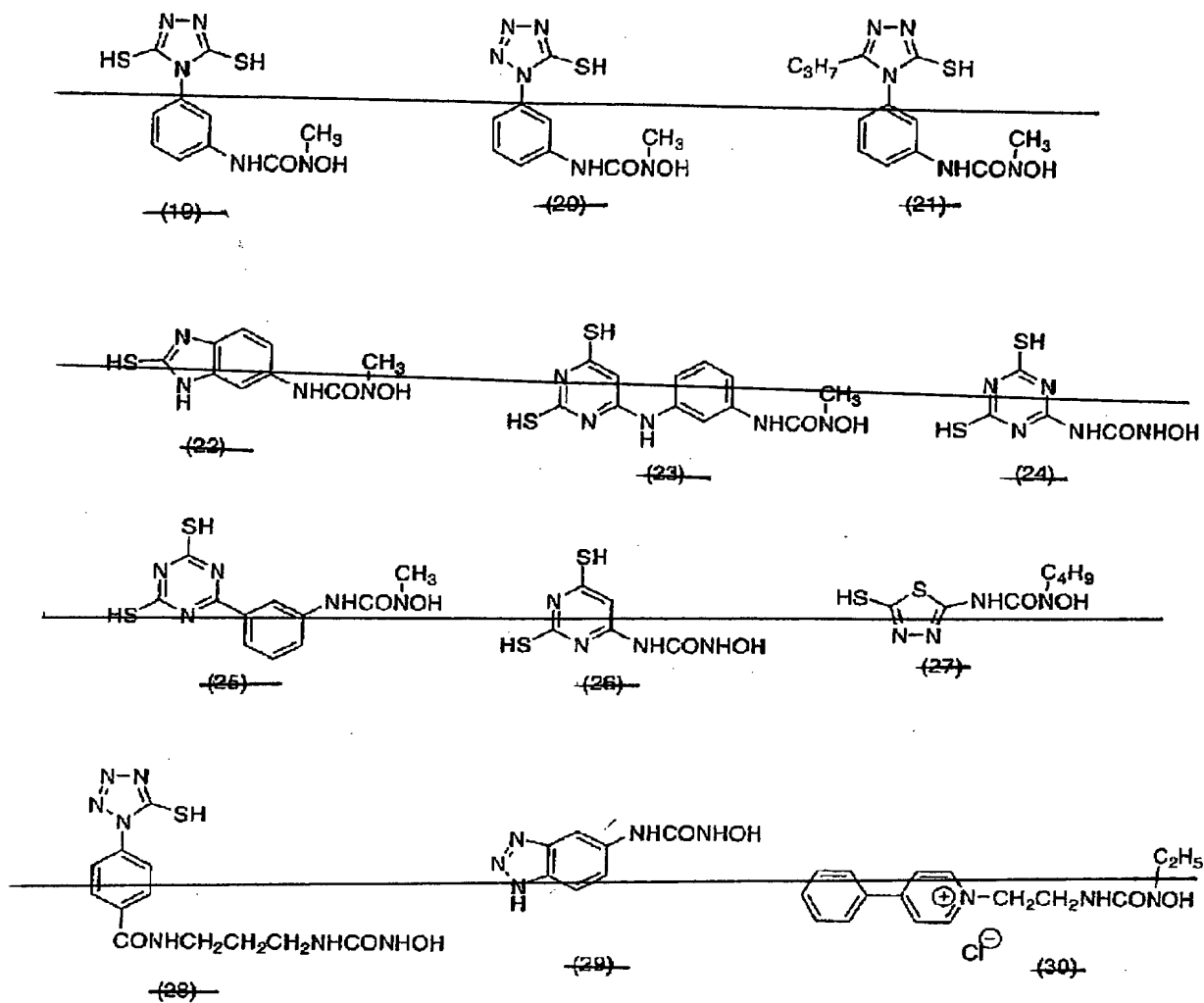


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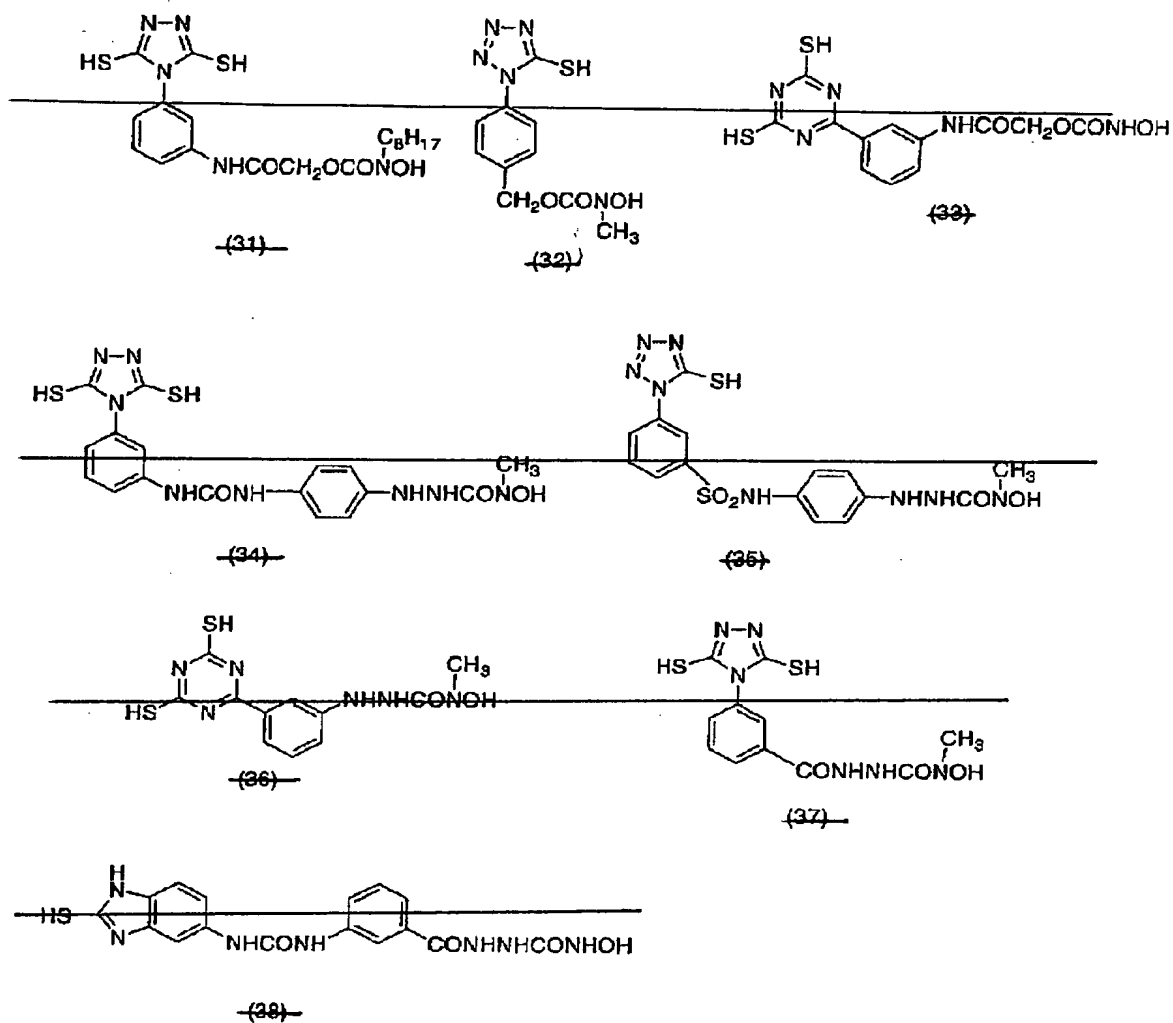
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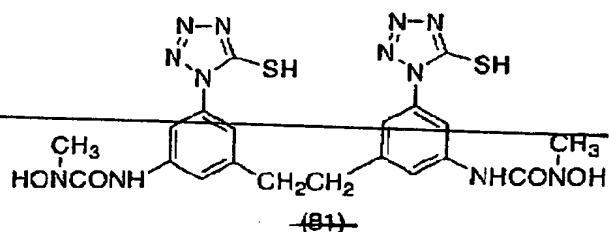
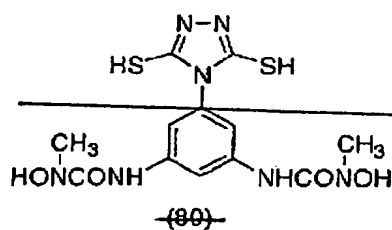
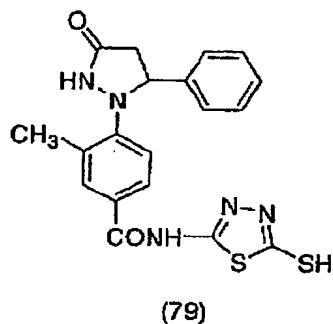
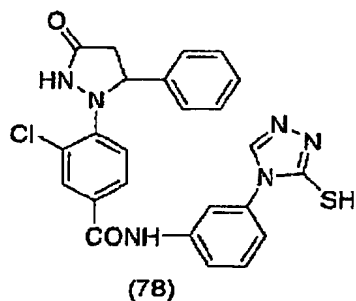
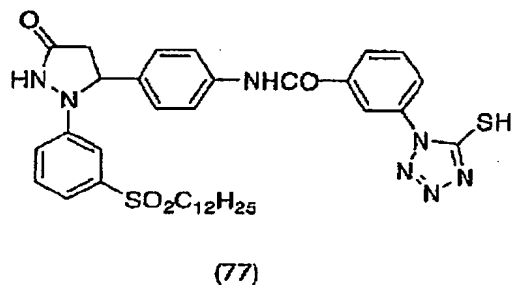
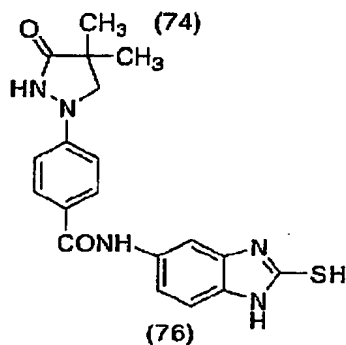
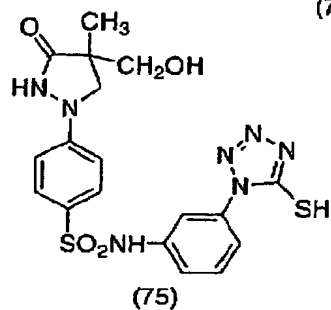
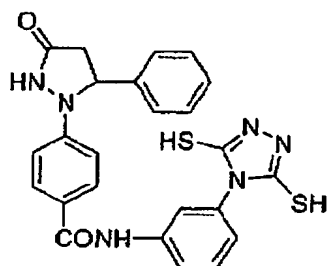
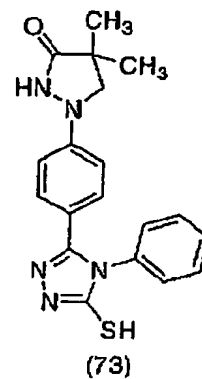
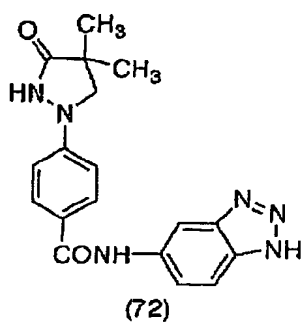
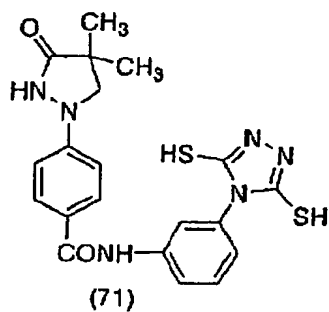
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25. (cancelled)

26. (Previously presented): The method of claim 1, wherein the photothermographic material further comprises a compound represented by the following formula (H):



wherein in formula (H), X is a bromine atom; Y is SO₂; N is 1; and Q is an aryl group or a heterocyclic group.

27. (Currently added): The method of claim 1, wherein the photothermographic material is thermally developed by a plate heater.